

ink in the pressure chambers; a power supply member electrically connected with the driving portion for supplying driving signals to the driving portion; a protrusion provided in at least either of the surface of the spaced portion facing the passage portion and the surface of the passage portion facing the spaced portion; and a sealing member disposed adjacent to the protrusion for sealing a space between the passage portion and the spaced portion. The alleged combination of Hubbard and DeYoung fails to disclose or suggest these features.

Applicant's invention of claim 11 calls for an ink-jet head, comprising a passage unit in which a plurality of ink ejecting nozzles are formed, the passage unit including a plurality of individual ink passages running to the nozzles through pressure chambers; a reservoir unit including an ink reservoir in which ink is stored and from which the stored ink is fed to the passage unit; an actuator unit bonded to the passage unit for imparting squirting energy to the ink in the pressure chambers; and a power supply member electrically connected with the actuator unit for supplying driving signals to the actuator unit; wherein the reservoir unit has a bonded surface bonded to the passage unit and a spaced surface extended across and spaced apart from the actuator unit, a protrusion is provided in an area of the spaced surface of the reservoir unit, the area is opposite to the bonded surface with respect to an area facing the actuator unit, and the power supply member is in abutment with both of the protrusion and the passage unit, and a sealing member for sealing a space between the passage unit and the reservoir unit is disposed at the abutment portion. The alleged combination of Hubbard and DeYoung fails to disclose or suggest these features.

Contrary to the Office Action assertion, Hubbard fails to disclose or suggest a spaced portion, a driving portion, and a protrusion that correspond to Applicant's spaced portion, driving portion, and protrusion as recited in claim 1. Similarly, Hubbard fails to disclose or suggest a spaced surface, a protrusion, and a reservoir unit that correspond to Applicant's spaced surface, protrusion, and reservoir unit as recited in claim 11.

First, the alleged spaced portion (i.e., fill tube 104; Fig. 7) of Hubbard is not spaced apart from and facing the passage portion (i.e., elements 84, 86, 88, 90, 92; Fig. 7). Instead, the fill tube 104 is mounted to the outside surface of cover plate 108 (Figs. 6-9). As Hubbard describes, in the course of operation of the nozzle array 82, as to each nozzle 112, ink is drawn through the fill tube 104, through the channel 106, and through the restrictor orifice 110 into an associated chamber 118 (col. 7, lines 49-54; see also arrow 114 in Fig. 7). The fill tube 104 is mounted on the outside part of the cover plate 108 so that fill tube 104 can mate with outlet 150 (Fig. 11).

As shown in Figs. 7-11 of Hubbard, the outside surface of the cover plate 108 does not face the passage portion (i.e., elements 84, 86, 88, 90, 92; Fig. 7). Instead, the outside surface of the cover plate 108 faces the outlets 150. The fill tubes 104 are mounted on the outside surface of cover plate 108 and mate with outlets 150 (col. 8, lines 49-52). Accordingly, the fill tube 104 is not a spaced portion spaced apart from and facing the passage portion, as recited in claim 1.

Similarly, the fill tube 104 of Hubbard does not meet the recitation of claim 11 having a spaced surface extended across and spaced apart from the actuator unit, and Hubbard does not have a protrusion provided in an area of the spaced surface of the reservoir unit opposite to the bonded surface with respect to an area facing the actuator unit.

Second, the alleged driving portion (Fig. 7, transducer 96) of Hubbard does not correspond to the driving portion as recited claim 1. In Hubbard, the transducer 96 is bonded to the diaphragm plate 90 and faces the inside of the cover plate 108 (Fig. 7). Thus, the transducer 96 does not face the spaced portion (i.e., fill tubes 104), but instead, faces the cover plate 108.

Third, the alleged protrusion (i.e., cover plate 108) of Hubbard does not correspond to the protrusion as recited in claims 1 and 11. In Hubbard, the cover plate 108 is bonded to the

manifold 92 so as to overlie the window 94 and cable 98 and thereby protect the transducer 96 and the cable 98 (col. 7, lines 35-42). Although the manifold 92 of Hubbard has clearance holes 138, 142 (Figs. 7-9) and a recessed shelf member 102, which is adapted to support the cable 98 (col. 7, lines 26-28), these are not protrusions. Further, the four sides of the rectangular cover plate 108 are smooth or flat (Figs. 7 and 9). Accordingly, cover plate 108 has no protrusions.

Thus, Hubbard's cover plate 108 does not meet the recitation of claim 1 having a protrusion provided in at least either of the surface of the spaced portion facing the passage portion and the surface of the passage portion facing the spaced portion. Nor does Hubbard's cover plate 108 meet the recitation of claim 11 having a protrusion provided in an area of the spaced surface of the reservoir unit opposite to the bonded surface with respect to an area facing the actuator unit.

Fourth, Hubbard's reservoir unit does not correspond to Applicant's reservoir unit as recited in claim 11 because Hubbard's reservoir unit (i.e., fill manifold 146 and ink inlet 148) is connected to fill tubes 104 (Fig. 10) and is not bonded to the passage unit (i.e., elements 84, 86, 88, 90, 96 of Hubbard.). Thus, Hubbard's fill manifold 146 and ink inlet 148 do not have a bonded surface bonded to the passage unit.

DeYoung fails to overcome the deficiencies of Hubbard as applied to claims 1 and 11.

Because the alleged combination of Hubbard and DeYoung does not disclose or suggest the features as recited in claims 1 and 11, the alleged combination of Hubbard and DeYoung cannot possibly render obvious the subject matter of claims 2-10, which depend from claim 1, and the subject matter of claim 12, which depends from claim 11, for the reasons discussed with respect to claims 1 and 11 and for the additional features recited therein. It is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-12 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: April 5, 2006

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